APPENDIX B

LIVESTOCK GRAZING

SELECTIVE MANAGEMENT

A worksheet, containing specific criteria, was developed to categorize allotments. Six specific criteria were addressed for each allotment. The criteria were as follows: (see Allotment Categorization Worksheet, page B-3).

1. Is the public land proposed for retention or disposal?

2. Is the range condition and trend satisfactory or unsatisfactory?

3. Is the site potential for improvement low, moderate or high?

4. Are the resource conflicts low, moderate or high?

5. Are management goals being met?

6. Is the percent public land greater or lesser than 20%?

Of the 6 criteria, the resource specific criteria (2-5) were considered the most significant in categorizing allotments. Utilizing the six specific criteria each allotment was placed into one of three categories: Maintain; improve; custodial.

Maintain allotments are described as follows:

> Most of the public lands in the allotment are proposed for retention; the range condition and trend is satisfactory; site potential for improvement is moderate or low; resource conflicts are moderate or low; management goals are being met; and the percent public land in the allotment is greater than 20%. Generally, these allotments have no significant resource problems and present management is achieving management goals.

Improve allotments are described as follows:

> Most of the public lands in the allotment are proposed for retention; range condition and trend are unsatisfactory; site potential for improvement is high; resource conflicts are high; management goals are not being met; and percent federal range may be greater or less than 20%. An allotment may be placed into the Improve category for any one or more of the aforementioned resource specific criteria being applicable.

Custodial allotments are described as follows:

> Most of the public lands in the allotment are proposed for retention or disposal; range condition and trend are satisfactory; site potential for improvement is low or moderate; resource conflicts are low or moderate; management goals are being met; and percent public land is less than 20%. The Custodial allotment is the same as a Maintain allotment except the percent public land is less than 20%.

Distribution of public funds for improvement and BLM personnel involvement will have highest priority for the Improve allotments, followed by Maintain and Custodial allotments. Within these categories, allotments will be prioritized according to the degree of resource problems and the need for immediate improvement. Improvement potential in terms of a positive return on

Allotment Categorization

Allotment: _____

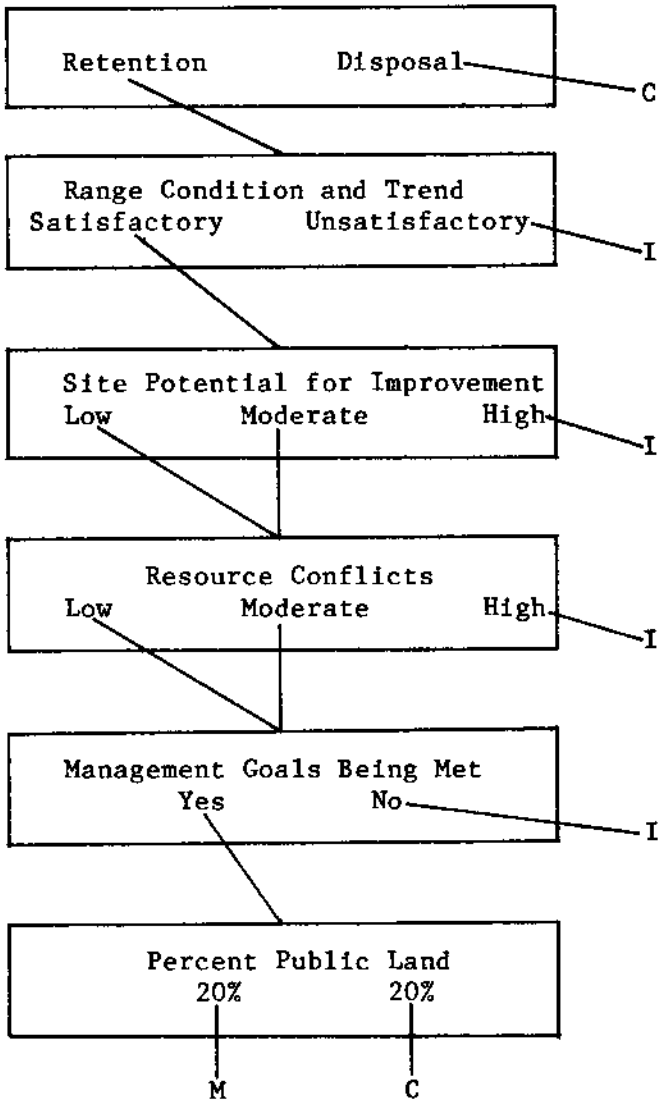
Comments: _____

Comments: _____

Comments: _____

Comments: _____

Comments: _____



M - Maintain
I - Improvement
C - Custodial

public investments will also be a priority criteria. Allotment priority may also improve when interested parties are willing to contribute with the BLM in cost share improvements for obtaining or improving resource conditions.

The management category for an allotment may change when resource conditions change or when additional data becomes available.

LIVESTOCK CONVERSIONS

The District Livestock Conversion Policy is based upon past practice and current guidance and regulations. The general guidelines of the policy are:

1. Previous commitments to conversions made in approved AMPs would be honored.

2. Environmental assessments would be completed to identify impacts of the conversions and mitigating measures necessary to meet multiple use objectives.

3. Concerns of other permittees in the affected allotment would be considered in analysis of the conversion proposal.

4. An allotment conversion plan would be prepared and approved.

5. The amount of conversion from sheep to cattle would be in proportion to the allotment's suitability for cattle grazing.

6. All conversions would be initially conservative (50 percent conversion for the first three years as modified by suitability and water availability).

7. Necessary fencing would be completed prior to cattle use.

8. Sufficient water would be available.

9. Results of ongoing monitoring studies would determine whether the new AMP and amount of conversion were satisfactory.

10. Final amounts converted would depend on the desired season of use, initial balance between spring and fall sheep preference, and resource response.

Future Livestock Use Adjustments

If the results of resource monitoring studies show that the proposed grazing management is not meeting the multiple use objectives of the Medicine Lodge Resource Management Plan, livestock use adjustments will be made in accordance with the BLM grazing administration regulations and existing policy. Livestock use adjustments could take the form of changes in the grazing system, changes in season of use, reductions or increases in active preference, or a combination of all of these.

RANGE IMPROVEMENTS

The following design features, construction practices and mitigation measures are common to the several kinds of range improvements proposed in the Medicine Lodge RMP. Structural improvements are generally installations which help

control livestock distribution, while nonstrucutural improvements are vegetation treatments.

Structural Improvements

Fences

New fences would provide exterior allotment boundaries, divide allotments into pastures and protect sites having other values from livestock disturbance. Fencing would be three or four strand barbed-wire built in accordance with BLM specifications. In big game habitat, fences would be constructed with a top wire no higher than 42 inches above ground level and a smooth bottom wire at least 16 inches above ground level. Existing fences that create wildlife movement problems would be modified. Where fences cross existing roads, cattleguards or gates would be installed. Gates would be installed as needed. Fence lines may be cleared to the extent necessary for construction and maintenance but mechanical clearing of vegetation to bare soil would not be allowed.

Cattleguards

Cattleguards would be 8 feet wide and 12 to 24 feet long, depending upon the traffic type and pattern.

Wells

Wells would generally be located on high points so that outlying troughs could be supplied by gravity flow from a storage tank adjacent to the well. In addition to the tank, the well site would generally have a well house to protect the generator, and would be enclosed by a fence. Open storage tanks would have bird ladders to allow wildlife use and escapement. All applicable state laws and regulations which apply to the development of ground water would be observed. Disturbed areas would be rehabilitated.

Springs

Springs would be developed or redeveloped using a backhoe to install a buried collection system. The collection system would be covered and fitted with a delivery pipe. A pipeline would be installed to deliver water to a trough for use by livestock and wildlife. Normally, the spring area is fenced to exclude livestock following development. The riparian zone will be retained at the source.

Pipelines and Troughs

Water pipelines would be buried in a trench excavated by a backhoe, with excavated material used for the backfill. Rigid plastic pipe may be used. Flexible pipe may also be installed with a ripper tooth. Valves would be installed at intervals along each pipeline to allow easy drainage to prevent freezing. Troughs would be placed where needed to provide an even distribution of livestock water. Each trough would have a bird ladder to allow wildlife use and escapement. Separate wildlife water storage and watering devices may also be constructed at regular intervals. Disturbed areas would be rehabilitated.

Roads

Several miles of new and/or existing roads would be bladed to provide access to new water developments and to grazing areas which now receive little use. Existing vegetation would be eliminated and the soil surface would be bared. Depending on the amount of traffic herbaceous vegetation could reestablish itself upon the new roads without impairing their function.

Prescribed Fire

Prescribed fire may be used to release the native understory from sagebrush competition in areas proposed for brush control (see Maps 3,4,5 & 7). Burning would be done to meet the objectives of this plan and in accordance with site-specific prescribed burn plans. Plant succession would be carefully weighed in preparing burn plans. Where wildlife habitat is a major consideration, areas would be burned to create a mosiac of shrubbery and herbaceous vegetation. Burned areas would be rested from livestock grazing for at least two growing seasons following treatment.

Plowing, Disking and Seeding

This treatment would be used to eliminate undesirable plant species competition in order to establish new seedings. Treatment would be done on areas having a low potential under other management practices. Size limitations on individual treatment areas may be necessary in major wildlife habitat areas. Seed would generally be planted with a standard rangeland drill. The seed mixture would include grass, forb and shrub seeds as appropriate for the specific site and management objectives. Treated areas would not be grazed for at least two growing seasons following treatment.

Interseeding

Desirable plant species would be interseeded with existing vegetation. A seed dribbler, a small scalper/seeder or range drill would be used to interseed strips. Broadcast seedings could possibly be used as well. Species to be seeded would be selected to meet management objectives developed for the allotment.

Chemical Control of Vegetation

The use of chemicals to control unwanted vegetation would be considered when it was environmentally acceptable and a cost-effective method to meet management goals and objectives. All regulations and policies regarding the use of chemical on public land would be followed.

Chaining and Rotobeating

In general this treatment would be used to release the native understory from shrub competition in areas where prescribed burning is undesirable due to soil erosion.

A tractor pulling a chain, rail or rotobeater would be used, creating areas of mosiac patterns. Chained areas would not be grazed for at least one growing season following treatment. Other treatment areas would be evaluated for rest on a case by case basis.

GRAZING SYSTEMS

Rest-Rotation Grazing

Under a rest-rotation grazing system, the allotment is divided into pastures, usually with comparable grazing capacities. Grazing is deferred on various pastures during succeeding years in a rotation sequence with complete rest for a year also included in a planned sequence. Each pasture is systematically grazed and rested so that livestock production and other resource values are provided for, while the vegetation cover is simultaneously maintained or improved. This practice provides greater protection of the soil resource against wind and water erosion.

Any of several rest-rotation grazing systems may be used, depending upon the objectives for the allotment and the number of pastures.

Deferred Rotation Grazing

Deferred rotation is the postponement of grazing on different parts of an allotment in succeeding years. This allows each pasture to rest successively during the growing season to permit seed production, establishment of seedlings and restoration of plant vigor (American Society of Range Management 1964). One or more pastures are grazed during the spring, while the remaining one or more pastures are rested until after seed ripening of key species, and then grazed. Deferred rotation grazing differs from rest-rotation grazing in that no yearlong rest is provided.

Deferred Grazing

Deferred grazing is the postponement of grazing by livestock on an area for a specified period of time during the growing season. Under this system, grazing would begin after key plants have reached an advanced state of development in their annual growth cycle. The growing season rest provided by this system promotes plant reproduction, establishment of new plants or restoration of the vigor of old plants (American Society of Range Management 1964).

Seasonal Grazing

Seasonal grazing is use by livestock during one or more seasons of the year. Seasonal grazing occurs during the same season each year and does not involve rotation or deferment. For our purposes, seasonal grazing also includes season-long grazing (livestock use throughout the grazing season). The most common types of seasonal grazing in the planning area are spring-fall sheep grazing, spring-fall cattle grazing, season-long cattle grazing, and winter sheep grazing.

METHODOLOGY USED IN THE VEGETATIVE INVENTORY

A vegetative inventory was conducted during the 1982 and 1983 field seasons in conjunction with a third-order soil survey. The inventory gathered information on range site classifications, present vegetation, ecological condition, and apparent trend.

Classification

Two classification systems were used during the inventory. Sites with remnant, native plant species were classified according to the Soil Conservation Service's Range Sites Inventory Method (USDA-SCS, 1976). This system classifies sites according to geographic region, soil characteristics, mean annual precipitation, and potential plant communities to the extent that it can be interpreted for the site.

Areas with exotic species introduced by seeding were classified with a modified technique. A seeding was classified according to geographic region, soil characteristics and mean annual precipitation. The existing plant community was rated on the amount of seeded species occupying the site. Native vegetation on seeding sites was not given an ecological rating.

Ecological Condition

Inventory crews first identified and delineated the boundaries for the sites to be inspected. Estimates of plant species composition, based on weight, were then made for the plant community found on each site. The present species composition was then compared to the expected potential species composition from the SCS's Range Site Descriptions. A condition rating was computed for the vegetation on each site. This rating represents the amount of departure from the potential plant community (See Range Condition Worksheet, page B-9).

Four condition classes are set forth by the SCS: excellent, good, fair, and poor. An excellent condition community would have 76-100 percent of the kinds, amounts and proportions of vegetation produced in the potential plant community. Good, fair and poor condition classes would have 51-75 percent, 26-50 percent and 0-25 percent, respectively, of the kinds, amounts and proportions of the potential vegetation.

Five condition classes were assigned during the vegetative inventory: Excellent, good, fair, poor, and disturbed.

The disturbed class represented areas where the natural plant community was altered by chaining, burning, spraying, or by any other environmental or man-caused action. Sand dunes were also placed in this class.

Range Trend

Present range trend was determined using permanent, 3-foot by 3-foot photo trend plots and observed apparent trend ratings made during the vegetative inventory. Allotments with permanent photo trend plots (8 allotments) were given a trend rating from those plots. If no long-term data were available, allotments were rated on observed apparent trend reading (see Observed Apparent Trend form, page B-10).

PROJECTING ECOLOGICAL CONDITION AND TREND

Projections of ecological (range) condition and range trend were made after considering present condition, present vegetative composition, current trend, wildfire, proposed stocking levels, grazing systems, and other management facilities. The following assumptions were made:

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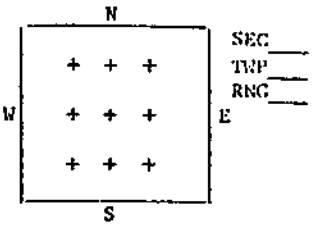
May 1980



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RANGE CONDITION WORKSHEET

Allotment _____ Date _____
District & P.U. No. _____ Aerial Photo No. _____
Ecological Site Name _____ Examiner _____
Vegetative Type _____ Write-up No. _____

Plant Groups	Plant Names or Symbols	% or Weight Present	% or Weight Potential
Grasses and Grass-like Plants			
____ % or #			
Forbs			
____ % or #			
Shrubs and Trees			
____ % or #			
100% or #	TOTALS (100% or Pounds)		

Condition Indicators (Check ones that apply)

% Potential Vegetation	Current Erosion	Stand for Site	Preferred Species Present	Final Condition Rating
100-76	Stable	3/4 to full	Many to all 30+%	Excell.
75-51	Slightly active	1/2 to 3/4	Several to Many 20-30%	Good
50-26	Moderately active	1/4 to 1/2	Few to Several 10-20%	Fair
25-0	Critical or Severely active	0 to 1/4	None to Few 0-10%	Poor

Remarks

Ground Cover Data	%
Litter	
Veg.	
Bare	
Rock	
	100%

ESTIMATED PRODUCTION:

Total Lbs/Ac (air dry) _____ _____

Usable Lbs/Ac _____ _____
(Soil Mapping Units)

A/AUM _____

OBSERVED APPARENT TREND - Range Condition

		Possible Points	Rating*	Remarks
1.A. VEGETATION SEEDED	More than 50 percent of the total vegetation is composed of the seeded species. If shrubs are present, the seeded species occur mainly in open spaces between shrubs. Undesirable annual vegetation is absent or nearly so.	5-6		
	25 to 50 percent of the vegetation is composed of the seeded species. If shrubs are present, some seeded species occur in open, unprotected areas. Limited amounts of undesirable annual vegetation are present.	3-4		
	Less than 25 percent of the vegetation is composed of the seeded species. Seeded species are generally protected by shrubs or rocks. There is an overabundance of undesirable annuals and/or shrubs.	0-2		
1.B. VEGETATION NATIVE	There is, or tends to be, a heterogeneous mixture of grasses, forbs, and shrubs across the landscape. Major native forage grasses occur in open, unprotected areas. Invaders or unnatural annual vegetation is less than 5 percent. Browse species show no evidence of hedging.	5-6		
	Areas of pure stands of undesirable perennials or invading annuals are present. Some major native forage plants occur in open, unprotected areas. Invader or unnatural annuals make up less than 15 percent of the production. Browse species show moderate hedging.	3-4		
	Poor variation exists among grasses, forbs, and shrubs, with an over-abundance of undesirable annuals or shrubs. Major native forage species are generally protected by shrubs or rocks. Browse species showing heavy hedging.	0-2		
2. VIGOR	Desirable grasses, forbs, and shrubs are vigorous--showing good health. These plants should have good size, color, and should produce abundant herbage.	7-10		
	Desirable grasses, forbs, and shrubs have moderate vigor. They are medium-size with fair color and producing moderate amounts of herbage; some seed stalks and seedheads are present.	3-6		
	Desirable grasses, forbs, and shrubs have low vigor. They appear unhealthy with small size and poor color. Portions of clumps or entire plants are dead or dying. Seed stalks and seedheads almost non-existent except in protected areas.	0-2		
3. AGE CLASS DISTRIBUTION AND REPRODUCTION	There is seedling establishment (plants over two years old) of desirable climax species in open spaces between plants and along edges of soil pedestals. There is evidence that the older, less desirable plants are dying and are being replaced by the desirable climax species.	7-10		
	Seedlings of individual species are becoming established at about the same rate as the older plants are dying. There is little evidence of change in species composition. Seedlings are primarily in protected spots.	3-6		
	Mature and dying plants are being replaced by seedlings of invader species or undesirable climax species. Any seedlings of the desirable species are found only in protected areas.	0-2		
4. SURFACE LITTER	Surface litter is accumulating in place.	5		
	Moderate movement of surface litter is apparent and deposited against obstacles.	4		
	Very little surface litter is remaining.	0-3		
5. SOIL MOVEMENT	None or slight visual evidence of soil movement. No exposed roots.	4-5		
	Moderate movement of soil particles visible. Some plants have roots exposed.	2-3		
	Movement occurs with each event. Soil and debris deposited against minor obstructions. Terracing may be present. Many plants have roots exposed.	0-1		
		Total		

*See instructions.

7-18 Downward
19-26 Static
27-36 Upward

General Remarks: